

REFERENCES

- ALI, S. & S.D. RIPLEY (1989): Handbook of the Birds of India and Pakistan. Vol. 1. Divers to Hawks. Oxford University Press, Bombay. Pp 93-103.
- BEVANGER, K. (1998): Biological and conservation aspects of bird mortality caused by electricity power lines: a review. *Biol. Conserv.* 86: 67-76.
- BREEDEN, S. & B. BREEDEN (1982): The drought of 1979-1980 at the Keoladeo Ghana Sanctuary, Bharatpur, Rajasthan. *J. Bombay Nat. Hist. Soc.* 79: 1-37.
- ELLIOTT, A. (1992): Family Ciconiidae (Storks). Pp. 441-442. In: Handbook of the Birds of the World. Vol 1. (Eds: del Hoyo, J., A. Elliott & J. Sargatal). Lynx Edicions, Barcelona.
- GRIMMETT, R., C. INSKIPP & T. INSKIPP (1998): Birds of the Indian Subcontinent. Oxford University Press, New Delhi. Pp. 573-574.
- KAHL, M.P. (1973): Comparative ethology of the Ciconiidae. Part 6. The Black-necked, Saddlebill, and Jabiru Storks (Genera *Xenorhynchus*, *Ephippiorhynchus* and *Jabiru*). *The Condor* 75: 17-27.
- RAHMANI, A.R. (1989): Status of the Black-necked Stork *Ephippiorhynchus asiaticus* in the Indian subcontinent. *Forktail* 5: 99-110.
- WOOD, D.S. (1984): Concordance between classifications of the Ciconiidae based on behavioural and morphological data. *J. Orn.* 125: 25-37.

7. RED-CRESTED POCHARD — *RHODONESSA RUFINA* (PALLAS) IN KACHCHH

Though a winter visitor to Pakistan and northwest India, including the Saurashtra region of Gujarat, the Red-crested Pochard *Rhodonessa rufina* (Pallas), as far as we know, has not been seen in Kachchh. Dr. Sálím Ali's survey of Kachchh in 1943-44 failed to observe it. The earlier published lists of Dr. Ferdinand Stoliczka and A.C. Hume do not include *Rhodonessa rufina* in Kachchh. Ali and Ripley (1968) mention that this diving duck is common and locally abundant, particularly in Pakistan and northwest India. Roberts (1991) says that it has a limited breeding range in 'warmer steppic latitudes in central Asia and Turkestan. It is a winter migrant visitor to Pakistan which has now become rather rare.'

We had gone to Mandvi taluka on January 19, 2003 for our annual Asian mid-winter waterbird census. On our way to one of the count sites, we stopped at the tank of Don village, where a fair number of ducks were present. While we watched the ducks through our binoculars we noticed a pair of *Rhodonessa rufina* amongst them. The drake was unmistakable with his handsome plumage and red bill, and it did not take long to identify the duck swimming beside him.

AP photographed the drake. We showed the photo to M.K. Himmatsinhji, our mentor, who confirmed the identification and advised us to inform the Society, hence this note.

February 24, 2003

S.N. VARU
Temple Street, Juna Vas,
Madhapur, Bhuj,
Kachchh 370 020, Gujarat, India.

N.N. BAPAT
18, Van Vihar Society, Bhuj,
Kachchh 370 001, Gujarat, India.

T.B. CHHAYA
I, Santosh Society, Bhuj,
Kutch 370 001, Gujarat, India.

ASHWIN POMAL
Pomal Jewellers, Vokla Chowk, Bhuj,
Kutch 370 001, Gujarat, India.

REFERENCES

- ALI, SÁLÍM & S.D. RIPLEY (1968): Handbook of the Birds of India and Pakistan, Vol. 1, Oxford University Press, Bombay.
- ROBERTS, T.J. (1991): The Birds of Pakistan, Vol. 1, Oxford University Press, Karachi.

8. PREDATION BY MARSH HARRIER *CIRCUS AERUGINOSUS* ON CHICK OF SARUS CRANE *GRUS ANTIGONE ANTIGONE* IN KOTA, RAJASTHAN

The Sarus Crane *Grus antigone antigone* is a threatened species found largely in north and central India. It is a large-bird species that has suffered a rapid population decline in recent times as a result of widespread reduction in the extent and quality of wetland habitats that are being converted to agriculture fields (BirdLife International 2001, Sundar *et al.* 2000).

Few ecological studies on Sarus Cranes have examined in detail the various aspects of its breeding biology, nest-site requirements and existing threats to breeding sites, as also the causes of chick mortality.

Breeding biology of the Sarus Crane was studied in the semi-arid landscape of Kota and Bharatpur districts of Rajasthan from February 2000 to June 2002. Data on number

of eggs laid, egg-loss, number of hatchlings and hatchling mortality was recorded. The nests were monitored till the time the chicks reached juvenile stage and subsequently weaning success was calculated. Six Sarus Crane families were chosen and intensively monitored till the hatchling reached the weaned stage. It was found that fledgling success was affected both by natural causes such as predation, wetness of nesting site, food availability, as well as by anthropogenic causes such as egg robbing and prevalent agricultural practices. Mortality of Sarus Crane recorded in the study area for two consecutive years has been shown in Table 1.

Table 1: Mortality of Sarus Crane young in Kota district (2000-2001)

| Year | Total no. of chicks hatched | Reasons for Mortality | | | |
|------|-----------------------------|-----------------------|---------------|---------------|---------|
| | | Dog | Marsh Harrier | Human-related | Unknown |
| 2000 | 17 | 2 | 0 | 1 | 12 |
| 2001 | 34 | 0 | 1 | 0 | 16 |

The chosen focal-families were also examined for parent-chick interactions using the scan sampling method. During the course of these observations on one of the focal families, consisting of two chicks 40 and 39 days old, an incident of chick predation was noted. While the parents were feeding one of the chicks, the second chick which was feeding alone 25-30 m away from the parents, was left unattended for a brief

period. A Marsh Harrier attacked this chick and repeatedly pecked its head, causing severe injury, but flew away without feeding on the chick. Although the harrier was clearly preying upon on the chick, the reason for abandoning the prey is not clear. The injured chick died within two hours and the parent birds left the feeding area and moved away.

Predators previously recorded for Sarus Crane chicks include jackals (Walkinshaw 1973; Ramachandran and Vijayan 1994) and dogs (Mukherjee and Borad, *pers. obs.*). Although an observation of a male Sarus Crane calling loudly and chasing a Marsh Harrier from its nesting territory has been recorded previously, indicating the possibility of chick predation by large raptors (Iqbal 1992; Mukherjee *et al.* 2002), the present study confirms and records predation by Marsh Harrier.

ACKNOWLEDGEMENTS

We thank Mr. S.B. Sawarkar, Director, Wildlife Institute of India, Dehra Dun and the Chief Wildlife Warden, Rajasthan for their help. Meena and Gopi Sundar are thanked for comments on the manuscript.

January 2, 2003

JATINDER KAUR
B.C. CHOUDHURY
Wildlife Institute of India,
Post Box No. 18,
Dehra Dun 248 001,
Uttaranchal, India.

REFERENCES

- BIRDLIFE INTERNATIONAL (2001): Threatened Birds of Asia: The BirdLife International Red Data Book. BirdLife International, Cambridge, U.K.
- IQBAL, P. (1992): Breeding behaviour in Sarus Crane *Grus antigone antigone*. M.Sc. Thesis, Aligarh Muslim University, Aligarh, India.
- MUKHERJEE, A., C.K. BORAD & B.M. PARASHARYA (2002): Breeding performance of the Indian Sarus Crane in the agricultural landscape of western India. *Biological Conservation* 105: 263-269.
- RAMACHANDRAN, N.K. & V.S. VIJAYAN (1994): Distribution and general ecology of the Sarus Crane (*Grus antigone*) in Keoladeo National Park, Bharatpur, Rajasthan. *J. Bombay Nat. Hist. Soc.* 91(2): 211-223.
- SUNDAR, K.S.G., J. KAUR & B.C. CHOUDHURY (2000): Distribution, demography and conservation status of the Indian Sarus Crane (*Grus antigone antigone*) in India. *J. Bombay Nat. Hist. Soc.* 97(3): 319-339.
- WALKINSHAW, L.H. (1973): Cranes of the world. Winchester Press, New York.

9. THE LESSER KESTREL *FALCO NAUMANNI* AND AMUR FALCON *FALCO AMURENSIS* IN THE GARO HILLS, MEGHALAYA, INDIA

Both the Lesser Kestrel *Falco naumanni* and Amur Falcon *F. amurensis* are mainly passage migrants to India. The Amur Falcon, which migrates in countless swarms in autumn, is also a scarce breeder in north-eastern India (Baker 1928; Samant *et al.* 1995). Both species are often seen together and migrate on a broad front, with confirmed sightings

throughout many areas in the Indian subcontinent. Visual records are mainly between October and early-January, but little is known of this large-scale migration involving thousands of birds. The weather pattern that triggers these migrations is also not known. Ali and Ripley (1978) had collated all available records till 1970. With the upsurge of interest in